SEQUENCE LISTING

<110> WEIHE, EBERHARD
      SCHAFER, MARTIN

<120> SCREENING METHOD USING BNPI AND DNPI

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<151> 2002-06-13

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Leu Glu Leu Ser Ala Asp Gly Arg Pro Val Thr Thr Gln Thr Arg Asp
          35                  40                  45

Pro Pro Val Val Asp Cys Thr Cys Phe Gly Leu Pro Arg Arg Tyr Ile
      50                  55                  60

Ile Ala Ile Met Ser Gly Leu Gly Phe Cys Ile Ser Phe Gly Ile Arg
 65                  70                  75                  80

Cys Asn Leu Gly Val Ala Ile Val Ser Met Val Asn Asn Ser Thr Thr
                  85                  90                  95

His Arg Gly Gly His Val Val Val Gln Lys Ala Gln Phe Ser Trp Asp
              100                 105                 110

Pro Glu Thr Val Gly Leu Ile His Gly Ser Phe Phe Trp Gly Tyr Ile
              115                 120                 125

Val Thr Gln Ile Pro Gly Gly Phe Ile Cys Gln Lys Phe Ala Ala Asn
      130                 135                 140

Arg Val Phe Gly Phe Ala Ile Val Ala Thr Ser Thr Leu Asn Met Leu
145                 150                 155                 160

Ile Pro Ser Ala Ala Arg Val His Tyr Gly Cys Val Ile Phe Val Arg
                  165                 170                 175

Ile Leu Gln Gly Leu Val Glu Gly Val Thr Tyr Pro Ala Cys His Gly
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Ile Trp Ser Lys Trp Ala Pro Pro Leu Glu Arg Ser Arg Leu Ala Thr
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Tyr Glu Ser Pro Ala Leu His Pro Ser Ile Ser Glu Glu Glu Arg Lys
            260             265             270

Tyr Ile Glu Asp Ala Ile Gly Glu Ser Ala Lys Leu Met Asn Pro Leu
        275             280             285

Thr Lys Phe Ser Thr Pro Trp Arg Arg Phe Phe Thr Ser Met Pro Val
    290             295             300

Tyr Ala Ile Ile Val Ala Asn Phe Cys Arg Ser Trp Thr Phe Tyr Leu
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Leu Leu Ile Ser Gln Pro Ala Tyr Phe Glu Glu Val Phe Gly Phe Glu
            325             330             335

Ile Ser Lys Val Gly Leu Val Ser Ala Leu Pro His Leu Val Met Thr
        340             345             350

Ile Ile Val Pro Ile Gly Gly Gln Ile Ala Asp Phe Leu Arg Ser Arg
        355             360             365

Arg Ile Met Ser Thr Thr Asn Val Arg Lys Leu Met Asn Cys Gly Gly
    370             375             380

Phe Gly Met Glu Ala Thr Leu Leu Leu Val Val Gly Tyr Ser His Ser
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Lys Gly Val Ala Ile Ser Phe Leu Val Leu Ala Val Gly Phe Ser Gly
            405             410             415

Phe Ala Ile Ser Gly Phe Asn Val Asn His Leu Asp Ile Ala Pro Arg
            420             425             430

Tyr Ala Ser Ile Leu Met Gly Ile Ser Asn Gly Val Gly Thr Leu Ser
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Gly Met Val Cys Pro Ile Ile Val Gly Ala Met Thr Lys His Lys Thr
    450             455             460

Arg Glu Glu Trp Gln Tyr Val Phe Leu Ile Ala Ser Leu Val His Tyr
465             470             475             480

Gly Gly Val Ile Phe Tyr Gly Val Phe Ala Ser Gly Glu Lys Gln Pro
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Trp Ala Glu Pro Glu Glu Met Ser Glu Glu Lys Cys Gly Phe Val Gly
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His Asp Gln Leu Ala Gly Ser Asp Asp Ser Glu Met Glu Asp Glu Ala
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Leu Glu Leu Ser Ala Asp Gly Arg Pro Val Thr Thr Gln Thr Arg Asp
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Pro Pro Val Val Asp Cys Thr Cys Phe Gly Leu Pro Arg Arg Tyr Ile
        50              55                  60

Ile Ala Ile Met Ser Gly Leu Gly Phe Cys Ile Ser Phe Gly Ile Arg
 65                  70                  75                 80

Cys Asn Leu Gly Val Ala Ile Val Ser Met Val Asn Asn Ser Thr Thr
                85                  90                  95

His Arg Gly Gly His Val Val Val Gln Lys Ala Gln Phe Ser Trp Asp
            100                 105                 110

Pro Glu Thr Val Gly Leu Ile His Gly Ser Phe Phe Trp Gly Tyr Ile
            115                 120                 125

Val Thr Gln Ile Pro Gly Gly Phe Ile Cys Gln Lys Phe Ala Ala Asn
    130                 135                 140

Arg Val Phe Gly Phe Ala Ile Val Ala Thr Ser Thr Leu Asn Met Leu
145                 150                 155                 160

Ile Pro Ser Ala Ala Arg Val His Tyr Gly Cys Val Ile Phe Val Arg
                165                 170                 175

Ile Leu Gln Gly Leu Val Glu Gly Val Thr Tyr Pro Ala Cys His Gly
            180                 185                 190

Ile Trp Ser Lys Trp Ala Pro Pro Leu Glu Arg Ser Arg Leu Ala Thr
            195                 200                 205
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Thr Ala Phe Cys Gly Ser Tyr Ala Gly Ala Val Val Ala Met Pro Leu
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Tyr Gly Ser Phe Gly Ile Phe Trp Tyr Leu Phe Trp Leu Leu Val Ser
            245   250   255

Tyr Glu Ser Pro Ala Leu His Pro Ser Ile Ser Glu Glu Glu Arg Lys
            260   265   270

Tyr Ile Glu Asp Ala Ile Gly Glu Ser Ala Lys Leu Met Asn Pro Leu
    275   280   285

Thr Lys Phe Ser Thr Pro Trp Arg Arg Phe Phe Thr Ser Met Pro Val
    290   295   300

Tyr Ala Ile Ile Val Ala Asn Phe Cys Arg Ser Trp Thr Phe Tyr Leu
305   310   315   320

Leu Leu Ile Ser Gln Pro Asp Tyr Phe Glu Glu Val Phe Gly Phe Glu
            325   330   335

Ile Ser Lys Val Gly Leu Val Ser Ala Leu Pro His Leu Val Met Thr
            340   345   350

Ile Ile Val Pro Ile Gly Gly Gln Ile Ala Asp Phe Leu Arg Ser Arg
    355   360   365

Arg Ile Met Ser Thr Thr Asn Val Arg Lys Leu Met Asn Cys Gly Gly
    370   375   380

Phe Gly Met Glu Ala Thr Leu Leu Leu Val Val Gly Tyr Ser His Ser
385   390   395   400

Lys Gly Val Ala Ile Ser Phe Leu Val Leu Ala Val Gly Phe Ser Gly
            405   410   415

Phe Ala Ile Ser Gly Phe Asn Val Asn His Leu Asp Ile Ala Pro Arg
            420   425   430

Tyr Ala Ser Ile Leu Met Gly Ile Ser Asn Gly Val Gly Thr Leu Ser
            435   440   445

Gly Met Val Cys Pro Ile Ile Val Gly Ala Met Thr Lys His Lys Thr
    450   455   460

Arg Glu Glu Trp Gln Tyr Val Phe Leu Ile Ala Ser Leu Val His Tyr
465   470   475   480

Gly Gly Val Ile Phe Tyr Gly Val Phe Ala Ser Gly Glu Lys Gln Pro
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Trp Ala Glu Pro Glu Glu Met Ser Glu Glu Lys Cys Gly Phe Val Gly

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His Asp Gln Leu Ala Gly Ser Asp Asp Ser Glu Met Glu Asp Glu Ala
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Leu Glu Leu Ser Ala Asp Gly Arg Pro Val Thr Thr His Thr Arg Asp
        35   40   45

Pro Pro Val Val Asp Cys Thr Cys Phe Gly Leu Pro Arg Arg Tyr Ile
     50   55   60

Ile Ala Ile Met Ser Gly Leu Gly Phe Cys Ile Ser Phe Gly Ile Arg
65   70   75   80

Cys Asn Leu Gly Val Ala Ile Val Ser Met Val Asn Asn Ser Thr Thr
                85   90   95

His Arg Gly Gly His Val Val Val Gln Lys Ala Gln Phe Asn Trp Asp
            100   105   110

Pro Glu Thr Val Gly Leu Ile His Gly Ser Phe Phe Trp Gly Tyr Ile
        115   120   125

Val Thr Gln Ile Pro Gly Gly Phe Ile Cys Gln Lys Phe Ala Ala Asn
    130   135   140

Arg Val Phe Gly Phe Ala Ile Val Ala Thr Ser Thr Leu Asn Met Leu
145   150   155   160

Ile Pro Ser Ala Ala Arg Val His Tyr Gly Cys Val Ile Phe Val Arg
                165   170   175

Ile Leu Gln Gly Leu Val Glu Gly Val Thr Tyr Pro Ala Cys His Gly
            180   185   190

Ile Trp Ser Lys Trp Ala Pro Pro Leu Glu Arg Ser Arg Leu Ala Thr
            195   200   205

Thr Ala Phe Cys Gly Ser Tyr Ala Gly Ala Val Val Ala Met Pro Leu
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Ala Gly Val Leu Val Gln Tyr Ser Gly Trp Ser Ser Val Phe Tyr Val
225   230   235   240

Tyr Gly Ser Phe Gly Ile Phe Trp Tyr Leu Phe Trp Leu Leu Val Ser
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Tyr Glu Ser Pro Ala Leu His Pro Ser Ile Ser Glu Glu Glu Arg Lys
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Tyr Ile Glu Asp Ala Ile Gly Glu Ser Ala Lys Leu Met Asn Pro Val
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Tyr Ala Ile Ile Val Ala Asn Phe Cys Arg Ser Trp Thr Phe Tyr Leu
305             310             315             320

Leu Leu Ile Ser Gln Pro Ala Tyr Phe Glu Glu Val Phe Gly Phe Glu
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Ile Ser Lys Val Gly Leu Val Ser Ala Leu Pro His Leu Val Met Thr
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Ile Ile Val Pro Ile Gly Gly Gln Ile Ala Asp Phe Leu Arg Ser Arg
        355             360             365

His Ile Met Ser Thr Thr Asn Val Arg Lys Leu Met Asn Cys Gly Gly
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Phe Gly Met Glu Ala Thr Leu Leu Leu Val Val Gly Tyr Ser His Ser
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Lys Gly Val Ala Ile Ser Phe Leu Val Leu Ala Val Gly Phe Ser Gly
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Phe Ala Ile Ser Gly Phe Asn Val Asn His Leu Asp Ile Ala Pro Arg
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Tyr Ala Ser Ile Leu Met Gly Ile Ser Asn Gly Val Gly Thr Leu Ser
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Gly Met Val Cys Pro Ile Ile Val Gly Ala Met Thr Lys His Lys Thr
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Arg Glu Glu Trp Gln Tyr Val Phe Leu Ile Ala Ser Leu Val His Tyr
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Gly Gly Val Ile Phe Tyr Gly Val Phe Ala Ser Gly Glu Lys Gln Pro
            485             490             495

Trp Ala Glu Pro Glu Glu Met Ser Glu Glu Lys Cys Gly Phe Val Gly
            500             505             510

His Asp Gln Leu Ala Gly Ser Asp Glu Ser Glu Met Glu Asp Glu Val
        515             520             525

Glu Pro Pro Gly Ala Pro Pro Ala Pro Pro Ser Tyr Gly Ala Thr
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His Ser Thr Val Gln Pro Pro Arg Pro Pro Pro Val Arg Asp Tyr
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Leu Glu Leu Ser Ala Asp Gly Arg Pro Val Thr Thr His Thr Arg Asp
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Pro Pro Val Val Asp Cys Thr Cys Phe Gly Leu Pro Arg Arg Tyr Ile
     50   55   60

Ile Ala Ile Met Ser Gly Leu Gly Phe Cys Ile Ser Phe Gly Ile Arg
 65   70   75   80

Cys Asn Leu Gly Val Ala Ile Val Ser Met Val Asn Asn Ser Thr Thr
             85   90   95

His Arg Gly Gly His Val Val Val Gln Lys Ala Gln Phe Asn Trp Asp
             100   105   110

Pro Glu Thr Val Gly Leu Ile His Gly Ser Phe Phe Trp Gly Tyr Ile
         115   120   125

Val Thr Gln Ile Pro Gly Gly Phe Ile Cys Gln Lys Phe Ala Ala Asn
     130   135   140

Arg Val Phe Gly Phe Ala Ile Val Ala Thr Ser Thr Leu Asn Met Leu
145   150   155   160

Ile Pro Ser Ala Ala Arg Val His Tyr Gly Cys Val Ile Phe Val Arg
             165   170   175

Ile Leu Gln Gly Leu Val Glu Gly Val Thr Tyr Pro Ala Cys His Gly
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Ile Trp Ser Lys Trp Ala Pro Pro Leu Glu Arg Ser Arg Leu Ala Thr
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Thr Ala Phe Cys Gly Ser Tyr Ala Gly Ala Val Val Ala Met Pro Leu
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Ala Gly Val Leu Val Gln Tyr Ser Gly Trp Ser Ser Val Phe Tyr Val
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Tyr Gly Ser Phe Gly Ile Phe Trp Tyr Leu Phe Trp Leu Leu Val Ser
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Tyr Ile Glu Asp Ala Ile Gly Glu Ser Ala Lys Leu Met Asn Pro Val
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Thr Lys Phe Asn Thr Pro Trp Arg Arg Phe Phe Thr Ser Met Pro Val
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Tyr Ala Ile Ile Val Ala Asn Phe Cys Arg Ser Trp Thr Phe Tyr Leu
305             310             315             320

Leu Leu Ile Ser Gln Pro Ala Tyr Phe Glu Glu Val Phe Gly Phe Glu
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Ile Ser Lys Val Gly Leu Val Ser Ala Leu Pro His Leu Val Met Thr
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Ile Ile Val Pro Ile Gly Gly Gln Ile Ala Asp Phe Leu Arg Ser Arg
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His Ile Met Ser Thr Thr Asn Val Arg Lys Leu Met Asn Cys Gly Gly
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Phe Gly Met Glu Ala Thr Leu Leu Leu Val Val Gly Tyr Ser His Ser
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Lys Gly Val Ala Ile Ser Phe Leu Val Leu Ala Val Gly Phe Ser Gly
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Phe Ala Ile Ser Gly Phe Asn Val Asn His Leu Asp Ile Ala Pro Arg
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Tyr Ala Ser Ile Leu Met Gly Ile Ser Asn Gly Val Gly Thr Leu Ser
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Gly Met Val Cys Pro Ile Ile Val Gly Ala Met Thr Lys His Lys Thr
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Arg Glu Glu Trp Gln Tyr Val Phe Leu Ile Ala Ser Leu Val His Tyr
465             470             475             480

Gly Gly Val Ile Phe Tyr Gly Val Phe Ala Ser Gly Glu Lys Gln Pro
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Trp Ala Glu Pro Glu Glu Met Ser Glu Glu Lys Cys Gly Phe Val Gly
            500             505             510

His Asp Gln Leu Ala Gly Ser Asp Glu Ser Glu Met Glu Asp Glu Ala
            515             520             525

Glu Pro Pro Gly Ala Pro Pro Ala Pro Pro Ser Tyr Gly Ala Thr
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His Ser Thr Val Gln Pro Pro Arg Pro Pro Pro Val Arg Asp Tyr
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<213> Homo sapiens

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Lys Lys Gln Asp Thr Gly Glu Thr Ile Glu Leu Thr Glu Asp Gly Lys
            35                  40                  45

Pro Leu Glu Val Pro Glu Arg Lys Ala Pro Leu Cys Asp Cys Thr Cys
        50                  55                  60

Phe Gly Leu Pro Arg Arg Tyr Ile Ile Ala Ile Met Ser Gly Leu Gly
65                  70                  75                  80

Phe Cys Ile Ser Phe Gly Ile Arg Cys Asn Leu Gly Val Ala Ile Val
                85                  90                  95

Asp Met Val Asn Asn Ser Thr Ile His Arg Gly Gly Lys Val Ile Lys
                100                 105                 110

Glu Lys Ala Lys Phe Asn Trp Asp Pro Glu Thr Val Gly Met Ile His
            115                 120                 125

Gly Ser Phe Phe Trp Gly Tyr Ile Ile Thr Gln Ile Pro Gly Gly Tyr
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Ile Ala Ser Arg Leu Ala Ala Asn Arg Val Phe Gly Ala Ala Ile Leu
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Leu Thr Ser Thr Leu Asn Met Leu Ile Pro Ser Ala Ala Arg Val His
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Tyr Gly Cys Val Ile Phe Val Arg Ile Leu Gln Gly Leu Val Glu Gly
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Val Thr Tyr Pro Ala Cys His Gly Ile Trp Ser Lys Trp Ala Pro Pro
            195             200             205

Leu Glu Arg Ser Arg Leu Ala Thr Thr Ser Phe Cys Gly Ser Tyr Ala
    210             215             220

Gly Ala Val Ile Ala Met Pro Leu Ala Gly Ile Leu Val Gln Tyr Thr
225             230             235             240

Gly Trp Ser Ser Val Phe Tyr Val Tyr Gly Ser Phe Gly Met Val Trp
            245             250             255

Tyr Met Phe Trp Leu Leu Val Ser Tyr Glu Ser Pro Ala Lys His Pro
            260             265             270

Thr Ile Thr Asp Glu Glu Arg Arg Tyr Ile Glu Glu Ser Ile Gly Glu
            275             280             285

Ser Ala Asn Leu Leu Gly Ala Met Glu Lys Phe Lys Thr Pro Trp Arg
    290             295             300

Lys Phe Phe Thr Ser Met Pro Val Tyr Ala Ile Ile Val Ala Asn Phe
305             310             315             320

Cys Arg Ser Trp Thr Phe Tyr Leu Leu Leu Ile Ser Gln Pro Ala Tyr
            325             330             335

Phe Glu Glu Val Phe Gly Phe Glu Ile Ser Lys Val Gly Met Leu Ser
            340             345             350

Ala Val Pro His Leu Val Met Thr Ile Ile Val Pro Ile Gly Gly Gln
            355             360             365

Ile Ala Asp Phe Leu Arg Ser Lys Gln Ile Leu Ser Thr Thr Thr Val
    370             375             380

Arg Lys Ile Met Asn Cys Gly Gly Phe Gly Met Glu Ala Thr Leu Leu
385             390             395             400

Leu Val Val Gly Tyr Ser His Thr Arg Gly Val Ala Ile Ser Phe Leu
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Val Leu Ala Val Gly Phe Ser Gly Phe Ala Ile Ser Gly Phe Asn Val
            420             425             430

Asn His Leu Asp Ile Ala Pro Arg Tyr Ala Ser Ile Leu Met Gly Ile
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Ser Asn Gly Val Gly Thr Leu Ser Gly Met Val Cys Pro Ile Ile Val
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Gly Ala Met Thr Lys Asn Lys Ser Arg Glu Glu Trp Gln Tyr Val Phe
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Leu Ile Ala Ala Leu Val His Tyr Gly Gly Val Ile Phe Tyr Ala Ile
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Phe Ala Ser Gly Glu Lys Gln Pro Trp Ala Asp Pro Glu Glu Thr Ser
            500                 505                 510

Glu Glu Lys Cys Gly Phe Ile His Glu Asp Glu Leu Asp Glu Glu Thr
        515                 520                 525

Gly Asp Ile Thr Gln Asn Tyr Ile Asn Tyr Gly Thr Thr Lys Ser Tyr
    530                 535                 540

Gly Ala Thr Thr Gln Ala Asn Gly Gly Trp Pro Ser Gly Trp Glu Lys
545                 550                 555                 560

Lys Glu Glu Phe Val Gln Gly Glu Val Gln Asp Ser His Ser Tyr Lys
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<210> 12
<211> 582
<212> PRT
<213> Rattus norvegicus

<400> 12
Met Glu Ser Val Lys Gln Arg Ile Leu Ala Pro Gly Lys Glu Gly Ile
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Lys Asn Phe Ala Gly Lys Ser Leu Gly Gln Ile Tyr Arg Val Leu Glu
            20   25   30

```
Lys Lys Gln Asp Asn Arg Glu Thr Ile Glu Leu Thr Glu Asp Gly Lys
        35              40              45

Pro Leu Glu Val Pro Glu Lys Lys Ala Pro Leu Cys Asp Cys Thr Cys
        50              55              60

Phe Gly Leu Pro Arg Arg Tyr Ile Ile Ala Ile Met Ser Gly Leu Gly
65              70              75              80

Phe Cys Ile Ser Phe Gly Ile Arg Cys Asn Leu Gly Val Ala Ile Val
            85              90              95

Asp Met Val Asn Asn Ser Thr Ile His Arg Gly Gly Lys Val Ile Lys
            100             105             110

Glu Lys Ala Lys Phe Asn Trp Asp Pro Glu Thr Val Gly Met Ile His
        115             120             125

Gly Ser Phe Phe Trp Gly Tyr Ile Ile Thr Gln Ile Pro Gly Gly Tyr
    130             135             140

Ile Ala Ser Arg Leu Ala Ala Asn Arg Val Phe Gly Ala Ala Ile Leu
145             150             155             160

Leu Thr Ser Thr Leu Asn Met Leu Ile Pro Ser Ala Ala Arg Val His
            165             170             175

Tyr Gly Cys Val Ile Phe Val Arg Ile Leu Gln Gly Leu Val Glu Gly
            180             185             190

Val Thr Tyr Pro Ala Cys His Gly Ile Trp Ser Lys Trp Ala Pro Pro
        195             200             205

Leu Glu Arg Ser Arg Leu Ala Thr Thr Ser Phe Cys Gly Ser Tyr Ala
    210             215             220

Gly Ala Val Ile Ala Met Pro Leu Ala Gly Ile Leu Val Gln Tyr Thr
225             230             235             240

Gly Trp Ser Ser Val Phe Tyr Val Tyr Gly Ser Phe Gly Met Val Trp
            245             250             255

Tyr Met Phe Trp Leu Leu Val Ser Tyr Glu Ser Pro Ala Lys His Pro
            260             265             270

Thr Ile Thr Asp Glu Glu Arg Arg Tyr Ile Glu Glu Ser Ile Gly Glu
        275             280             285

Ser Ala Asn Leu Leu Gly Ala Met Glu Lys Phe Lys Thr Pro Trp Arg
    290             295             300

Lys Phe Phe Thr Ser Met Pro Val Tyr Ala Ile Ile Val Ala Asn Phe
305             310             315             320

Cys Arg Ser Trp Thr Phe Tyr Leu Leu Leu Ile Ser Gln Pro Ala Tyr
            325             330             335
```

```
Phe Glu Glu Val Phe Gly Phe Glu Ile Ser Lys Val Gly Met Leu Ser
            340             345             350

Ala Val Pro His Leu Val Met Thr Ile Ile Val Pro Ile Gly Gly Gln
            355             360             365

Ile Ala Asp Phe Leu Arg Ser Lys Gln Ile Leu Ser Thr Thr Thr Val
    370             375             380

Arg Lys Ile Met Asn Cys Gly Gly Phe Gly Met Glu Ala Thr Leu Leu
385             390             395             400

Leu Val Val Gly Tyr Ser His Thr Arg Gly Val Ala Ile Ser Phe Leu
            405             410             415

Val Leu Ala Val Gly Phe Ser Gly Phe Ala Ile Ser Gly Phe Asn Val
            420             425             430

Asn His Leu Asp Ile Ala Pro Arg Tyr Ala Ser Ile Leu Met Gly Ile
            435             440             445

Ser Asn Gly Val Gly Thr Leu Ser Gly Met Val Cys Pro Ile Ile Val
    450             455             460

Gly Ala Met Thr Lys Asn Lys Ser Arg Glu Glu Trp Gln Tyr Val Phe
465             470             475             480

Leu Ile Ala Ala Leu Val His Tyr Gly Gly Val Ile Phe Tyr Ala Leu
            485             490             495

Phe Ala Ser Gly Glu Lys Gln Pro Trp Ala Asp Pro Glu Glu Thr Ser
            500             505             510

Glu Glu Lys Cys Gly Phe Ile His Glu Asp Glu Leu Asp Glu Glu Thr
            515             520             525

Gly Asp Ile Thr Gln Asn Tyr Ile Asn Tyr Gly Thr Thr Lys Ser Tyr
    530             535             540

Gly Ala Thr Ser Gln Glu Asn Gly Gly Trp Pro Asn Gly Trp Glu Lys
545             550             555             560

Lys Glu Glu Phe Val Gln Glu Ser Ala Gln Asp Ala Tyr Ser Tyr Lys
            565             570             575

Asp Arg Asp Asp Tyr Ser
            580
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<210> 13
<211> 2528
<212> DNA
<213> Mus musculus

<400> 13
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cagtagggtt cttttgcttt tttccttaca caagggttcg atgacgtttc tggtcaatct 240
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<210> 14
<211> 582
<212> PRT
<213> Mus musculus

<400> 14

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Lys Asn Phe Ala Gly Lys Ser Leu Gly Gln Ile Tyr Arg Val Leu Glu
            20                  25                  30

Lys Lys Gln Asp Asn Arg Glu Thr Ile Glu Leu Thr Glu Asp Gly Lys
```

```
              35                        40                        45

Pro Leu Glu Val Pro Glu Lys Lys Ala Pro Leu Cys Asp Cys Thr Cys
    50                  55                  60

Phe Gly Leu Pro Arg Arg Tyr Ile Ile Ala Ile Met Ser Gly Leu Gly
65                  70                  75                      80

Phe Cys Ile Ser Phe Gly Ile Arg Cys Asn Leu Gly Val Ala Ile Val
                85                  90                  95

Asp Met Val Asn Asn Ser Thr Ile His Arg Gly Gly Lys Val Ile Lys
            100                 105                 110

Glu Lys Ala Lys Phe Asn Trp Asp Pro Glu Thr Val Gly Met Ile His
        115                 120                 125

Gly Ser Phe Phe Trp Gly Tyr Ile Ile Thr Gln Ile Pro Gly Gly Tyr
    130                 135                 140

Ile Ala Ser Arg Leu Ala Ala Asn Arg Val Phe Gly Ala Ala Ile Leu
145                 150                 155                 160

Leu Thr Ser Thr Leu Asn Met Leu Ile Pro Ser Ala Ala Arg Val His
                165                 170                 175

Tyr Gly Cys Val Ile Phe Val Arg Ile Leu Gln Gly Leu Val Glu Gly
            180                 185                 190

Val Thr Tyr Pro Ala Cys His Gly Ile Trp Ser Lys Trp Ala Pro Pro
        195                 200                 205

Leu Glu Arg Ser Arg Leu Ala Thr Thr Ser Phe Cys Gly Ser Tyr Ala
    210                 215                 220

Gly Ala Val Ile Ala Met Pro Leu Ala Gly Ile Leu Val Gln Tyr Thr
225                 230                 235                 240

Gly Trp Ser Ser Val Phe Tyr Val Tyr Gly Ser Phe Gly Met Val Trp
                245                 250                 255

Tyr Met Phe Trp Leu Leu Val Ser Tyr Glu Ser Pro Ala Lys His Pro
            260                 265                 270

Thr Ile Thr Asp Glu Glu Arg Arg Tyr Ile Glu Glu Ser Ile Gly Glu
        275                 280                 285

Ser Ala Asn Leu Leu Gly Ala Met Glu Lys Phe Lys Thr Pro Trp Arg
    290                 295                 300

Lys Phe Phe Thr Ser Met Pro Val Tyr Ala Ile Ile Val Ala Asn Phe
305                 310                 315                 320

Cys Arg Ser Trp Thr Phe Tyr Leu Leu Leu Ile Ser Gln Pro Ala Tyr
                325                 330                 335
```

```
Phe Glu Glu Val Phe Gly Phe Glu Ile Ser Lys Val Gly Met Leu Ser
        340             345             350

Ala Val Pro His Leu Val Met Thr Ile Ile Val Pro Ile Gly Gly Gln
        355             360             365

Ile Ala Asp Phe Leu Arg Ser Lys Gln Ile Leu Ser Thr Thr Thr Val
    370             375             380

Arg Lys Ile Met Asn Cys Gly Gly Phe Gly Met Glu Ala Thr Leu Leu
385             390             395                 400

Leu Val Val Gly Tyr Ser His Thr Arg Gly Val Ala Ile Ser Phe Leu
            405             410             415

Val Leu Ala Val Gly Phe Ser Gly Phe Ala Ile Ser Gly Phe Asn Val
            420             425             430

Asn His Leu Asp Ile Ala Pro Arg Tyr Ala Ser Ile Leu Met Gly Ile
        435             440             445

Ser Asn Gly Val Gly Thr Leu Ser Gly Met Val Cys Pro Ile Ile Val
    450             455             460

Gly Ala Met Thr Lys Asn Lys Ser Arg Glu Glu Trp Gln Tyr Val Phe
465             470             475                 480

Leu Ile Ala Ala Leu Val His Tyr Gly Gly Val Ile Phe Tyr Ala Leu
            485             490             495

Phe Ala Ser Gly Glu Lys Gln Pro Trp Ala Asp Pro Glu Glu Thr Ser
            500             505             510

Glu Glu Lys Cys Gly Phe Ile His Glu Asp Glu Leu Asp Glu Glu Thr
        515             520             525

Gly Asp Ile Thr Gln Asn Tyr Ile Asn Tyr Gly Thr Thr Lys Ser Tyr
    530             535             540

Gly Ala Thr Ser Gln Glu Asn Gly Gly Trp Pro Asn Gly Trp Glu Lys
545             550             555                 560

Lys Glu Glu Phe Val Gln Glu Gly Ala Gln Asp Ala Tyr Thr Tyr Lys
            565             570             575

Asp Arg Asp Asp Tyr Ser                         °
        580
```